connection means, wherein said controlling step controls a method of giving a signal to the connection means by executing the device driver.

227. (Amended) A program according to Claim 219, wherein the information processing apparatus is a notebook personal computer of an electronic pocket book.

228. (Unamended) A program according to Claim 219, wherein the information processing apparatus is an electronic camera.

229. (Amended) A program according to Claim 219, wherein the information processing apparatus further instructs the information processing apparatus the perform a storing step of storing the device driver loaded by said loading step in a memory.

REMARKS

Summary

Independent Claims 9, 28, 150, 159, 170, 179, 190, 199, 210, and 219 recite at least one feature not disclosed or suggested by the patent to Ishikawa. Therefore, is the outstanding rejection of these claims over this patent proper?

Status of the claims

Claims 9, 28, and 150-229 are pending. Claims 9, 28, 150-157, 159-187, 189-207, 209-216, 218-227, and 229 have been amended. Claims 9, 28, 150, 159, 170, 179, 190, 199, 210, and 219 are independent.

Requested Action

Applicant respectfully requests the Office to reconsider and withdraw the outstanding rejections in view of the foregoing amendment and the following remarks.

Applicant also respectfully requests that this amendment be entered. This amendment could not have been presented earlier as it was earnestly believed that the claims on file would be found allowable. Given the examiner's familiarity with the application, applicant believes that a full understanding and consideration of these amendments would not require undue time or effort by the examiner. Moreover, for the reasons discussed below, applicant submits that these amendments place the application in condition for allowance. At the very least, they are believed to place the application in better form for appeal. Accordingly, entry of this amendment is believed to be appropriate and such entry is respectfully requested.

Formal Rejection

Claims 9, 28, 150, 159, 170, 179, 190, 199, 210, and 219 are rejected under 35 U.S.C. § 112, second paragraph.

In response, while not conceding the propriety of the rejection, these claims have been amended to address the points raised by the Examiner. Applicant believes that these claims now even more clearly satisfy 35 U.S.C. § 112, second paragraph.

Substantive rejection

Claims 9, 28, and 150-229 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,902, 146 (Ishikawa).

Response to substantive rejection

This rejection is respectfully traversed for the following reasons.

A. Independent Claims 9, 150, 170, 190, and 210

Independent Claim 150 relates to an information processing apparatus comprising recognition means for recognizing connection of a connected external device to the information processing apparatus and recognizing a device type of the connected external device. The apparatus also comprises read means, responsive to the recognition means recognizing connection of the connected external device to the information processing apparatus and the device type, for reading a device driver for controlling the connected external device either from the connected external device or from a memory area provided in information processing the apparatus.

By this arrangement, a device driver for controlling an external device either from the external device or from an internal memory of an information processing apparatus can be provided, depending on the type of external device.

In contrast, the Ishikawa patent is understood to relate to electronic apparatus that reads an ID code of a memory card connected to a connector, recognizes the type of card if the code is not FFH, and executes an emulation program stored in the memory card when the card is an emulation card. If the code is FFH, the apparatus is understood to execute a resident emulation program, since the code FFH indicates that no memory card is connected to the connector. Thus, this apparatus is understood to execute a resident emulation program if no memory card is connected to the connector, rather than executing a program depending upon the type of card connected to the connector, as in the present invention. Thus, this patent is not understood to

disclose or suggest read means, responsive to recognition means recognizing connection of a connected external device to an information processing apparatus and the device type, for reading a device driver for controlling the connected external device either from the connected external device or from a memory area provided in the information processing apparatus, as recited by Claim 150.

In addition, the emulation program taught by the Ishikawa patent is not understood to be a device driver for controlling a connected external device, as also recited by Claim 150.

The failure of this patent to disclose or suggest at least these two features proves fatal to establishing a prima facie case of obviousness against Claim 150, since MPEP §2142, requires that:

> To establish a prima facie case of obviousness... the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Thus, for this reason, Claim 150 is allowable over the applied art.

And, since Claims 9, 170, 190, and 210 are corresponding apparatus, method, storage medium, and program claims that recite similar features, they are all allowable for similar reasons.

B. Claims 28, 159, 179, 199, and 219

Independent Claim 159 relates to an information processing apparatus comprising recognition means for recognizing connection of a connected external device to the information processing apparatus and recognizing a device type of the connected external device. The apparatus also comprises load means, responsive to the recognition means recognizing the device type, for making a determination whether a device driver for controlling the connected external

device is to be loaded from the connected external device and loading the device driver into the information processing apparatus in accordance with the determination.

By this arrangement, a device driver from an external device can be loaded into an information processing apparatus, depending on the device type of the external device.

In contrast, the patent to Ishiskawa patent is understood to merely teach the selecting and executing of an emulation program stored in a memory region of a memory card. It is not understood to load a selected emulation program into the apparatus to which the memory card is attached. The emulation program is executable without being loaded into the apparatus because the emulation program is not understood to be used to control the memory card. Column 2, lines 53-64 of this patent state that ROM 2 stores two programs—a control program for controlling the entire apparatus and a resident emulation program. The ROM cannot store any emulation program stored in the connected memory card. Thus, this patent is not understood to disclose or suggest the step of loading a device driver for controlling a connected external device into an information processing apparatus in accordance with a determination that the device driver is to be loaded from the external device into the apparatus, as recited by Claim 159.

In addition, as noted above, the emulation program taught by the Ishikawa patent is not understood to be a device driver for controlling a connected external device, as also recited by Claim 159.

The failure of this patent to disclose or suggest at least these two features proves fatal to establishing a prima facie case of obviousness against Claim 159, since MPEP §2142 requires the patent to teach or suggest all the claimed features.

Thus, for this reason, Claim 159 is allowable over the applied art.

And, since Claims 28, 179, 1909 and 219 are corresponding apparatus, method, storage medium, and program claims that recite similar features, they are all allowable for similar reasons.

Conclusions

Since the Ishikawa patent fails to disclose or suggest at least two feature of the independent claims, MPEP § 242 mandates the allowance of these claims over this patent.

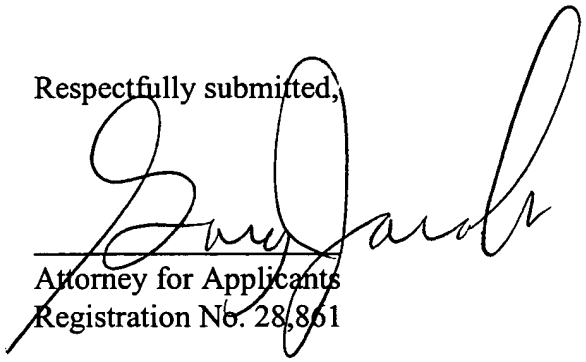
The dependent claims are allowable for the reasons given with respect to the independent claims and because they recite features which are patentable in their own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

In view of the above amendments and remarks, the claims are now in allowable form and entry of this amendment is considered proper. Therefore, early passage to issue is respectfully solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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MARKED-UP AMENDED CLAIMS

9. (Twice Amended) An information processing apparatus comprising:

a connector for connecting a detachable external device to said information processing apparatus, wherein the detachable external device is denoted as a connected detachable external device when connected to said information processing apparatus by said connector; and

a central processing unit comprising:

recognition means for recognizing connection of the connected detachable external device to said information processing apparatus by said connector and recognizing a device type of the connected detachable external device [based on data stored in the external device]; and

read means, responsive to said recognition means recognizing connection of the connected detachable external device to said information processing apparatus [the device connection] and the device type, for reading a device driver for controlling the connected detachable external device either from the connected detachable external device through said connector or from a memory area provided in said information processing apparatus,

wherein said read means executes a program for loading the device driver for the connected detachable external device connected by said connector.

28. (Twice Amended) An information processing apparatus comprising:

connector means for connecting a detachable external device to said information processing apparatus, wherein the detachable external device is denoted as a connected detachable external device when connected to said information processing apparatus by said connector;

recognition means for recognizing connection of the connected detachable external device to said information processing apparatus by said connector means and recognizing a device type of the connected detachable external device [based on data stored in the external device]; and

[read] load means, responsive to said recognition means recognizing the device type, for making a determination whether a device driver for controlling the connected detachable external device is to be [read] loaded from the connected detachable external device through said connector means, and [reading] loading the device driver into said information processing apparatus in accordance with the determination.

150. (Twice Amended) An information processing apparatus comprising:

[connection means for connecting a detachable external device to said apparatus;]

recognition means for recognizing connection of [the] a connected external device to said information processing apparatus [by said connection means] and recognizing a device type of the connected external device [based on data stored in the external device]; and

read means, responsive to said recognition means recognizing [the device] connection of the connected external device to said information processing apparatus and the device type, for reading a device driver for controlling the connected external device either from the connected external device [through said connection means] or from a memory area provided in information processing said apparatus.

151. (Amended) An apparatus according to Claim 150, further comprising control means for controlling the connected external device based on the device driver read by said read means.

152. (Amended) An apparatus according to Claim 150, wherein said recognition means recognizes connection of the connected external device to said information processing apparatus [the device connection] upon supplying power to said information processing apparatus.

153. (Amended) An apparatus according to Claim 150, wherein the connected external device comprises a random access memory card or a read only memory card.

154. (Amended) An apparatus according to Claim 150, wherein said recognition means recognizes the device type of the connected external device based on data stored in the connected external device [comprises a read only memory card].

155. (Amended) An apparatus according to Claim [150] 151, further comprising connection means for connecting the connected external device to said information processing apparatus, wherein said [apparatus is a notebook personal computer] control means controls a method of giving a signal to said connection means by executing the device driver.

156. (Amended) An apparatus according to Claim 150, wherein said apparatus is a notebook personal computer or an electronic pocket book.

157. (Amended) An apparatus according to Claim 150, wherein said information processing apparatus is an electronic camera.

159. (Amended) An information processing apparatus comprising:

[connection means for connecting a detachable external device to said apparatus;]

recognition means for recognizing connection of [the] a connected external device to said information processing apparatus by [said connection means] and recognizing a device type of the connected external device [based on data stored in the external device]; and

[read] load means, responsive to said recognition means recognizing the device type, for making a determination whether a device driver for controlling the connected external device is to be [read] loaded from the connected external device [through said connection means], and [reading] loading the device driver into said information processing apparatus in accordance with the determination.

160. (Amended) An apparatus according to Claim 159, wherein said recognition means recognizes whether the device type is a first type or a second type, and said [read] load means [reads] loads the device driver from the connected external device [through said connection means] if said recognition means recognizes that the device type is the first type.

161. (Amended) An apparatus according to Claim 160, wherein said [read] load means [reads] loads the device driver from a memory area provided in said information processing apparatus if said recognition means recognizes that the device type is the second type.

162. (Amended) An apparatus according to Claim 159, further comprising control means for controlling the connected external device based on the device driver [read] loaded by said [read] load means from the connected external device.

163. (Amended) An apparatus according to Claim 159, wherein said recognition means recognizes connection of the connected external device to said information processing apparatus [the device connection] upon supplying power to said information processing apparatus.

164. (Amended) An apparatus according to Claim 159, wherein the connected external device comprises a random access memory card or a read only memory card.

165. (Amended) An apparatus according to Claim 159, wherein said recognition means recognizes the device type of the connected external device based on data stored in the connected external device [comprises a read only memory card].

166. (Amended) An apparatus according to Claim [159] 162, further comprising connection means for connecting the connected external device to said information processing apparatus, wherein said [apparatus is a notebook personal computer] control means controls a method of giving a signal to said connection means by executing the device driver.

167. (Amended) An apparatus according to Claim 159, wherein said information processing apparatus is a notebook personal computer or an electronic pocket book.

168. (Amended) An apparatus according to Claim 159, wherein said information processing apparatus is an electronic camera.

169. (Amended) An apparatus according to Claim 159, further comprising a memory for storing the device driver [read] loaded by said [read] load means.

170. (Amended) A method for using an information processing apparatus and a connected [detachable] external device detachably connected to the information processing apparatus by connection means, said method comprising [the steps of]:

a connection recognizing step of recognizing connection of the connected external device to the information processing apparatus [by the connection means];

a type recognizing step of recognizing [the] a type of external device [the connection means connects] connected to the information processing apparatus [based on data stored in the external device]; and

a reading step of reading a device driver for controlling the connected external device either from the connected external device [through the connection means] or from a memory area provided in the information processing apparatus in response to said connection recognizing step recognizing connection of the connected external device to the information processing apparatus and in response to said type recognizing step recognizing the type of external device connected to the information processing apparatus [by the connection means].

171. (Amended) A method according to Claim 170, further comprising a controlling [the] step of controlling the connected external device based on the device driver read by said reading step.

172. (Amended) A method according to Claim 170, wherein said connection recognizing step recognizes [the device] connection of the connected external device to the information processing apparatus upon supplying power to the information processing apparatus.

173. (Amended) A method according to Claim 170, wherein the connected external device comprises a random access memory card or a read only memory card.

174. (Amended) A method according to Claim 170, wherein said type recognizing step recognizes the device type of the connected external device based on data stored in the connected [detachable wherein the] external device [comprises a read only memory card].

175. (Amended) A method according to Claim [170] 171, further comprising a connection step of connecting the connected external device to the information processing apparatus with connection means, wherein [the information processing apparatus is a notebook personal computer] said controlling step controls a method of giving a signal to the connection means by executing the device driver.

176. (Amended) A method according to Claim 170, wherein the information processing apparatus is a notebook personal computer or an electronic pocket book.

177. (Amended) A method according to Claim 170, wherein said information processing apparatus is an electronic camera.

178. (Amended) A method according to Claim 170, further comprising a storing [the] step of storing the device driver read by said reading step in a memory.

179. (Amended) A method for using an information processing apparatus and a [detachable] connected external device detachably connected to the information processing apparatus by connection means, said method comprising [the steps of]:

a connection recognizing step of recognizing connection of the connected external device to the information processing apparatus [by the connection means];

a type recognizing step of recognizing [the] a type of external device connected [the connection means connects] to the information processing apparatus [based on data stored in the external device];

a loading determining step of determining whether a device driver for the connected external device is to be [read] loaded from the connected external device into the information processing apparatus [through the connection means] in response to said type recognizing step recognizing the type of external device connected to the information processing apparatus [by the connection means]; and

a loading step of loading [reading] the device driver into the information processing apparatus in accordance with the determination performed in said loading determining step.

180. (Amended) A method according to Claim 179, wherein said type recognizing step recognizes whether the device type is a first type or a second type, and said [reading] loading step [reads] loads the device driver from the connected external device [through the connection means] if said type recognizing step recognizes that the device type is the first type.

181. (Amended) A method according to Claim 180, wherein said [reading] loading step [reads] loads the device driver from a memory area provided in the information processing apparatus if said type recognizing step recognizes that the device type is the second type.

182. (Amended) A method according to Claim 179, further comprising a controlling step of [the step of] controlling the connected external device based on the device driver [read] loaded by said [reading] loading step from the connected external device.

183. (Amended) A method according to Claim 179, wherein said connection recognizing step recognizes [the device] connection of the connected external device to the information processing apparatus upon supplying power to the information processing apparatus.

184. (Amended) A method according to Claim 179, wherein the external device comprises a random access memory card or a read only memory card.

185. (Amended) A method according to Claim 179, wherein said type recognizing step recognizes the device type of the connected external device based on data stored in the connected external device [comprises a read only memory card].

186. (Amended) A method according to Claim [179] 182, further comprising a connection step of connecting the connected external device to the information processing apparatus with connection means, wherein [the information processing apparatus is a notebook personal computer] said controlling step controls a method of giving a signal to the connection means by executing the device driver.

187. (Amended) A method according to Claim 179, wherein the information processing apparatus is a notebook personal computer or an electronic pocket book.

189. (Amended) A method according to Claim 179, further comprising a storing step of [the step of] storing the device driver [read] loaded by said [reading] loading step [in a memory].

190. (Amended) A storage medium readable by an information processing apparatus to which [an] a connected external device is detachably connectable [by connection means], said storage medium storing a program for controlling the operation of the information processing apparatus, the program instructing the information processing apparatus to perform [the following steps]:

a connection recognizing step of recognizing connection of the connected external device to the information processing apparatus [by the connection means];

a type recognizing step of recognizing [the] a type of external device connected [the connection means connects] to the information processing apparatus [based on data stored in the external device]; and

a reading step of reading a device driver for controlling the connected external device either from the connected external device [through the connection means] or from a memory area provided in the information processing apparatus in response to said connection recognizing step recognizing connection of the connected external device to the information processing apparatus and in response to said type recognizing step recognizing the type of external device connected to the information processing apparatus [by the connection means].

191. (Amended) A storage medium according to Claim 190, wherein the program stored on said storage medium also instructs the information processing apparatus to perform a controlling [the] step of controlling the connected external device based on the device driver read by said reading step.

192. (Amended) A storage medium according to Claim 190, wherein said connection recognizing step recognizes [the device] connection of the connected external device to the information processing apparatus upon supplying power to the information processing apparatus.

193. (Amended) A storage medium according to Claim 190, wherein the external device comprises a random access memory card or a read only memory card.

194. (Amended) A storage medium according to Claim 190, wherein said type recognizing step recognizes the device type of the connected external device based on data stored in the connected [the] external device [comprises a read only memory card].

195. (Amended) A storage medium according to Claim [190] 191, further comprising a connection step of connecting the connected external device to the information processing apparatus with connection means, wherein [the information processing apparatus is a notebook personal computer] said controlling step controls a method of giving a signal to the connection means by executing the device driver.

196. (Amended) A storage medium according to Claim 190, wherein the information processing apparatus is a notebook personal computer of an electronic pocket book.

197. (Amended) A storage medium according to Claim 190, wherein said information processing apparatus is an electronic camera.

198. (Amended) A storage medium according to Claim 190, wherein the program stored on the storage medium also instructs the information processing apparatus to perform a storing [the] step of storing the device driver read by said reading step in a memory.

199. (Amended) A storage medium readable by an information processing apparatus to which [an] a connected external device is detachably connectable [by connection means], said storage medium storing a program for controlling the operation of the information processing apparatus, the program instructing the information processing apparatus to perform [the following steps]:

a connection recognizing step of recognizing connection of the connected external device to the information processing apparatus [by the connection means];

a type recognizing step of recognizing the type of connected external device connected [the connection means connects] to the information processing apparatus [based on data stored in the external device];

a loading determining step of determining whether a device driver for controlling the connected external device is to be [read] loaded from the connected external device into the information processing apparatus [through the connection means] in response to said type recognizing step recognizing the type of external device connected to the information processing apparatus [by the connection means]; and

a loading step of loading [reading] the device driver into the information processing apparatus in accordance with the determination performed in said loading determining step.

200. (Amended) A storage medium according to Claim 199, wherein said type recognizing step recognizes whether the device type is a first type or a second type, and said [reading] loading step [reads] loads the device driver from the external device [through the connection means] if said type recognizing step recognizes that the device type is the first type.

201. (Amended) A storage medium according to Claim 200, wherein said [reading] loading step [reads] loads the device driver from a memory area provided in the information processing apparatus if said type recognizing step recognizes that the device type is the second type.

202. (Amended) A storage medium according to Claim 199, wherein the program stored on said storage medium also instructs the information processing apparatus to perform a

controlling [the] step of controlling the connected external device based on the device driver [read] loaded by said [reading] loading step from the connected external device.

203. (Amended) A storage medium according to Claim 199, wherein said connection recognizing step recognizes [the device] connection of the connected external device to the information processing apparatus upon supplying power to the information processing apparatus.

204. (Amended) A storage medium according to Claim 199, wherein the external device comprises a random access memory card or a read only memory card.

205. (Amended) A storage medium according to Claim 199, wherein said type recognizing step recognizes the device type of the connected external device based on data stored in the connected external device [comprises a read only memory card].

206. (Amended) A storage medium according to Claim [199] 202, further comprising a connection step of connecting the connected external device to the information processing apparatus with connection means, wherein [the information processing apparatus is a notebook personal computer] said controlling step controls a method of giving a signal to the connection means by executing the device driver wherein the information processing apparatus is a notebook personal computer.

207. (Amended) A storage medium according to Claim 199, wherein the information processing apparatus is a notebook personal computer or an electronic pocket book.

208. (Unamended) A storage medium according to Claim 199, wherein the information processing apparatus is an electronic camera.

209. (Amended) A storage medium according to Claim 199, further comprising a storing [the] step of storing the device driver [read] loaded by said [reading] loading step in a memory.

210. (Amended) A program for an information processing apparatus to which [an] a connected external device is detachably connected [by connection means], said program instructing the information processing apparatus to perform [the steps of]:

a connection recognizing step of recognizing connection of the connected external device to the information processing apparatus [by the connection means];

a type recognizing step of recognizing [the] a type of connected external device connected [the connection means connects] to the information processing apparatus [based on data stored in the external device]; and

a reading step of reading a device driver for controlling the connected external device either from the connected external device [through the connection means] or from a memory area provided in the information processing apparatus in response to said connection recognizing step recognizing connection of the connected external device to the information processing apparatus and in response to said type recognizing step recognizing the type of connected external device connected to the information processing apparatus [by the connection means].

211. (Amended) A program according to Claim 210, wherein said program further instructs the information processing apparatus to perform a controlling [the] step of controlling the connected external device based on the device driver read by said reading step.

212. (Amended) A program according to Claim 210, wherein said connection recognizing step recognizes [the device] connection of the connected external device to the information processing apparatus upon supplying power to the information processing apparatus.

213. (Amended) A program according to Claim 210, wherein the connected external device comprises a random access memory card or a read only memory card.

214. (Amended) A program according to Claim 210, wherein said type recognizing step recognizes the device type of the connected external device based on data stored in the connected [the] external device [comprises a read only memory card].

215. (Amended) A program according to Claim [210] 211, further comprising a connection step of connecting the connected external device to the information processing apparatus with connection means, wherein [the information processing apparatus is a notebook personal computer] said controlling step controls a method of giving a signal to the connection means by executing the device driver.

216. (Amended) A program according to Claim 210, wherein the information processing apparatus is a notebook personal computer or an electronic pocket book.

217. (Unamended) A program according to Claim 210, wherein the information processing apparatus is an electronic camera.

218. (Amended) A program according to Claim 210, wherein the program further instructs the information processing apparatus to perform a storing [the] step of storing the device driver read by said reading step in a memory.

219. (Amended) A program for an information processing apparatus to which [an] a connected external device is detachably connected [by connection means], said program instructing the information processing apparatus to perform [the steps of]:

a connection recognizing step of recognizing connection of the connected external device to the information processing apparatus [by the connection means];

a type recognizing step of recognizing [the] a type of connected external device connected [the connection means connects] to the information processing apparatus [based on data stored in the external device];

a loading determining step of determining whether a device driver for the connected external device is to be [read] loaded from the connected external device into the information processing apparatus [through the connection means] in response to said type recognizing step recognizing the type of connected external device connected to the information processing apparatus [by the connection means]; and

a loading step of loading [reading] the device driver into the information processing apparatus in accordance with the determination performed in said loading determining step.

220. (Amended) A program according to Claim 219, wherein said type recognizing step recognizes whether the device type is a first type or a second type, and said [reading] loading step [reads] loads the device driver from the connected external device [through the connection means] if said type recognizing step recognizes that the device type is the first type.

221. (Amended) A program according to Claim 220, wherein said [reading] loading step [reads] loads the device driver from a memory area provided in the information processing apparatus if said type recognizing step recognizes that the device type is the second type.

222. (Amended) A program according to Claim 219, wherein said program further instructs the information processing apparatus to perform a controlling [the] step of controlling the connected external device based on the device driver [read] loaded by said [reading] loading step from the connected external device.

223. (Amended) A program according to Claim 219, wherein said connection recognizing step recognizes [the device] connection of the connected external device to the information processing apparatus upon supplying power to the information processing apparatus.

224. (Amended) A program according to Claim 219, wherein the external device comprises a random access memory card or a read only memory card.

225. (Amended) A program according to Claim 219, wherein said type recognizing step recognizes the device type of the connected external device based on data stored in the connected external device [comprises a read only memory card].

226. (Amended) A program according to Claim [219] 222, further comprising a connection step of connecting the connected external device to the information processing apparatus with connection means, wherein [the information processing apparatus is a notebook personal computer] said controlling step controls a method of giving a signal to the connection means by executing the device driver.

227. (Amended) A program according to Claim 219, wherein the information processing apparatus is a notebook personal computer of an electronic pocket book.

228. (Unamended) A program according to Claim 219, wherein the information processing apparatus is an electronic camera.

229. (Amended) A program according to Claim 219, wherein the information processing apparatus further instructs the information processing apparatus the perform a storing [the] step of storing the device driver [read] loaded by said [reading] loading step in a memory.